

I claim:

1. A mold configured for use in preparing a portion of a golf ball from a ball material comprising a contact region, wherein the contact region is configured to contact the ball material during preparation of the portion, and wherein the contact region comprises porous metal.
2. A mold as defined in claim 1, wherein the porous metal has a porosity between about 5% and about 50% by volume.
3. A mold as defined in claim 2, wherein the porous metal has a porosity between about 5% and about 40% by volume.
4. A mold as defined in claim 3, wherein the porous metal has a porosity between about 10% and about 30% by volume.
5. A mold as defined in claim 1, wherein the porous metal comprises interconnected pores.
6. A mold as defined in claim 5, wherein the interconnected pores have diameters between about 3 and about 10 microns.
7. A mold as defined in claim 1, wherein the porous metal comprises aluminum.
8. A mold as defined in claim 1, wherein the porous metal comprises a metal alloy.

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16. A mold as defined in claim 1, wherein:  
the contact region of the mold comprises a sprue, runner, or gates;  
the sprue, runner, or gates are configured to route ball material to  
flow into the cavity; and  
the sprue, runner, or gates comprise porous metal.

17. A mold as defined in claim 1, wherein the mold is configured  
for use in an injection molding process.

18. A mold as defined in claim 1, wherein the mold is configured  
for use in a compression molding process.

19. A mold as defined in claim 1, wherein:  
the contact region of the mold defines an interior space, in which the  
ball material is situated, and an exterior space; and  
the mold further comprises a vacuum device configured to reduce the  
pressure in the exterior space to a value less than the pressure in the interior space.

20. A mold as defined in claim 19, and further comprising a  
pressurizing device configured to increase the pressure in the exterior space to a  
value greater than the pressure in the interior space.

21. A mold as defined in claim 1, wherein the contact region  
defines an interior space in which the ball material is situated and an exterior space,  
the mold further comprising a pressurizing device configured to increase the  
pressure in the exterior space to a value greater than the pressure in the interior  
space.

22. A mold as defined in claim 1, wherein the porous metal has porosity sufficient to allow gases to escape through the porous metal.

23. A method for forming a portion of a golf ball, the method comprising:

preparing a mold configured for use in preparing a portion of a golf ball from a ball material, wherein the mold comprises porous metal and has an exterior space having an exterior pressure and an interior space having an interior pressure, the mold further comprising a vacuum device configured to reduce the exterior pressure to a value less than the interior pressure;

using the vacuum device to reduce the exterior pressure below the interior pressure sufficient to increase flow of gas through the porous metal from the interior space to the exterior space; and

placing the ball material into the mold to form the portion so that gas flows from the interior space to the exterior space.

24. A method for forming a portion of a golf ball, the method comprising:

preparing a mold configured for use in preparing a portion of a golf ball from a ball material, wherein the mold comprises porous metal and has an exterior space having an exterior pressure and an interior space having an interior pressure, the mold further comprising a pressurizing device configured to increase the exterior pressure to a value greater than the interior pressure;

placing the ball material into the mold to form the portion; and

- 10 using the pressurizing device to increase the exterior pressure above the interior pressure to a value sufficient to improve release of the portion from the mold.

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